

Supplementary Material for State Capacity, Refugee Reception, and Attitudes towards Refugees

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Study 1: Descriptive Statistics

Table A1: Study 1 Descriptive Statistics

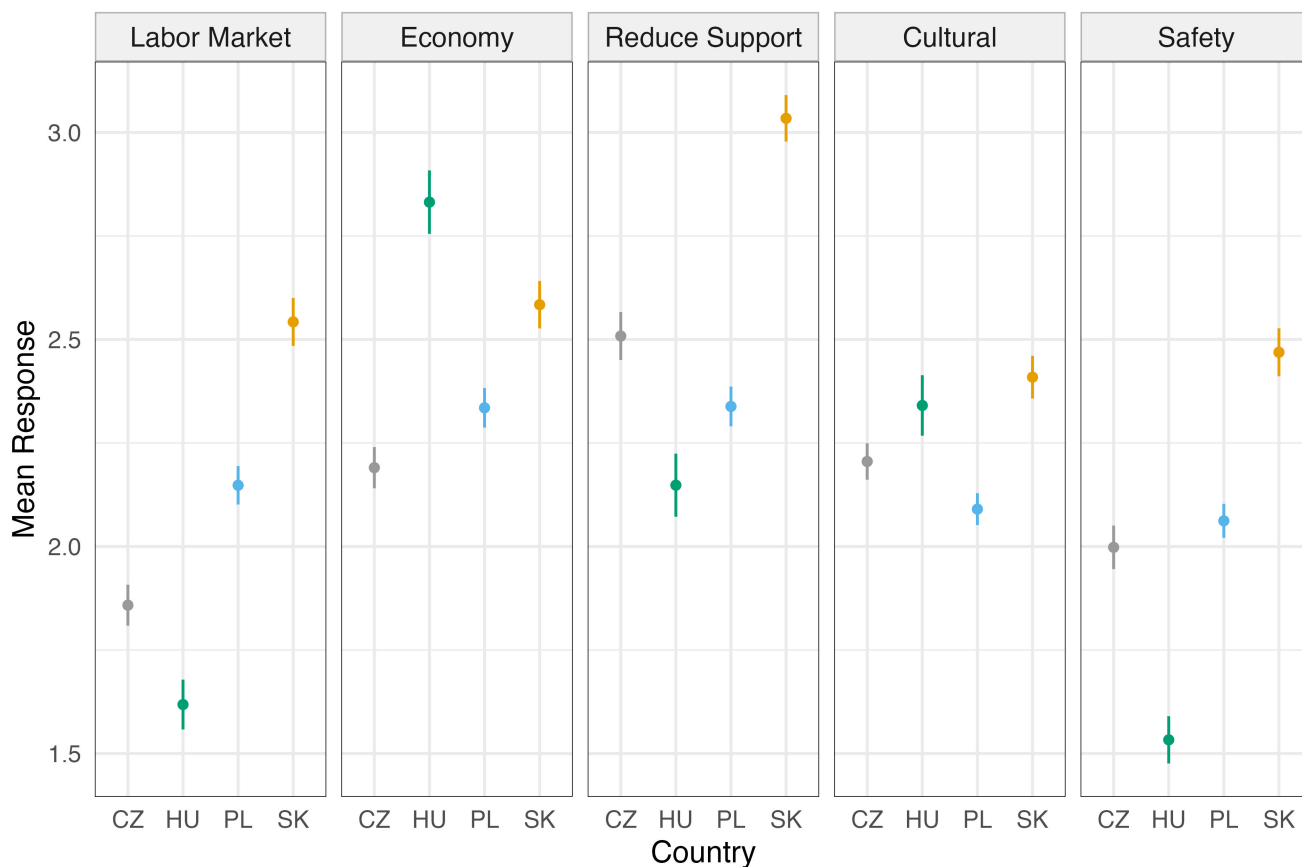
Variable	Level	Mean	SD	Min	Max	N
Age		49.51	17.15	18.00	92.00	4000
Reduce Support		2.52	0.97	1.00	4.00	3557
Free Healthcare		2.64	0.96	1.00	4.00	3783
Free Language Course		2.81	0.93	1.00	4.00	3839
Free Public Transport		1.99	0.86	1.00	4.00	3829
Reduced Rent		1.98	0.82	1.00	4.00	3624
Cultural		2.26	0.80	1.00	4.00	3590
Labor Market		2.04	0.91	1.00	4.00	3736
Sociotropic Econ.		2.48	0.92	1.00	4.00	3554
Safety		2.02	0.89	1.00	4.00	3791
Income		2.89	0.85	1.00	5.00	3936
Allow Ukrainians in Country	No					497
	Yes					3314
Gender	Male					1963
	Female					2037
Education	Elementary					583
	Secondary No Exam					1118
	Secondary					1390
	University					909
Locality	Rural					2795
	Urban					1205
Economic Problems	Not Mentioned					1305
	Mentioned					2695
Incompetent Government	Not Mentioned					2186
	Mentioned					1814
UKR: Family	No					2018
	Yes					1686
UKR: Close Friends	No					1110
	Yes					2619
UKR: Neighbors	No					714
	Yes					3137
UKR: Colleagues	No					614
	Yes					3091
Other: Family	No					2276
	Yes					1344
Other: Close Friends	No					1605
	Yes					2021
Other: Neighbors	No					1296
	Yes					2419
Other: Colleagues	No					1049

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Table A1 – continued from previous page

Variable	Level	Mean	SD	Min	Max	N
Inappropriate Contact	Yes					2606
	No					3041
War Responsibility	Yes					905
	Russia					2447
	Ukraine					225
	US/NATO					819
Country	Czech Republic					1000
	Hungary					1000
	Poland					1000
	Slovakia					1000

Figure A1: Concerns with Ukrainian Refugees in Central Europe (Original Scale)



Note: Means presented with 95% confidence intervals

Table A2: Correlations of Predictors and Outcome

	Allow in Country	Labor Market	Economy	Reduce Support	Cultural	Safety
Allow in Country	1					
Labor Market	-0.5343	1				
Economy	-0.2913	0.1185	1			
Reduce Support	-0.5739	0.5513	0.1582	1		
Cultural	-0.5423	0.2644	0.2934	0.3644	1	
Safety	-0.5338	0.6167	0.1253	0.6081	0.3194	1

Note: Polychoric correlations

Table A4: Variance Inflation Factors (VIF) for Table A3 Models

Model	Labor Market	Economic	Reduce Support	Cultural Threat	Safety
M1	1.207	1.035	1.270	1.063	1.295
M2	1.328	1.105	1.399	1.247	1.474
M3	1.217	1.246	1.395	1.188	1.653
M4	1.522	1.375	1.385	1.335	1.562
M5	1.232	1.166	1.221	1.638	1.187
M6	1.338	1.080	1.484	1.163	1.492

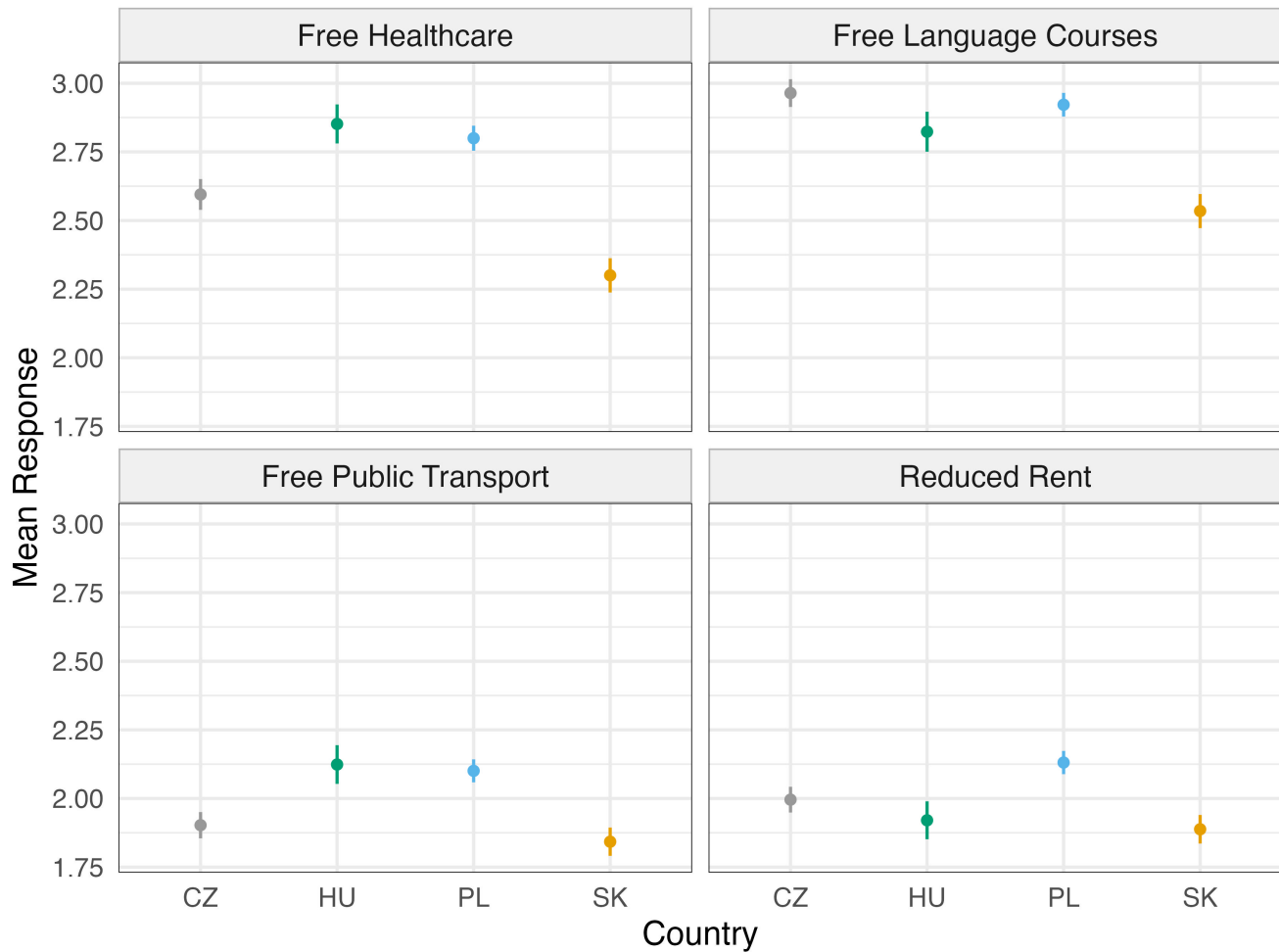
Study 1: Multiple Imputation

Multiple imputation was performed in R v. 4.4.0, using the *Amelia* package (Honaker et al. 2011). 50 multiply imputed datasets were created following the guidelines outlined in Von Hippel (2020). The approach suggests calculating the fraction of missing information with pilot imputations and setting a desired coefficient of variation for standard error estimates. Then the number of imputations is calculated using the following formula:

$$m \approx 1 + \frac{1}{2} \left(\frac{\text{FMI}}{\text{CV}} \right)^2$$

Final estimates are based on the average of the estimates of the complete data model, which computes the total variance using Rubin’s rules.

Figure A2: Views on Support for Ukrainian Refugees (Original Scale)



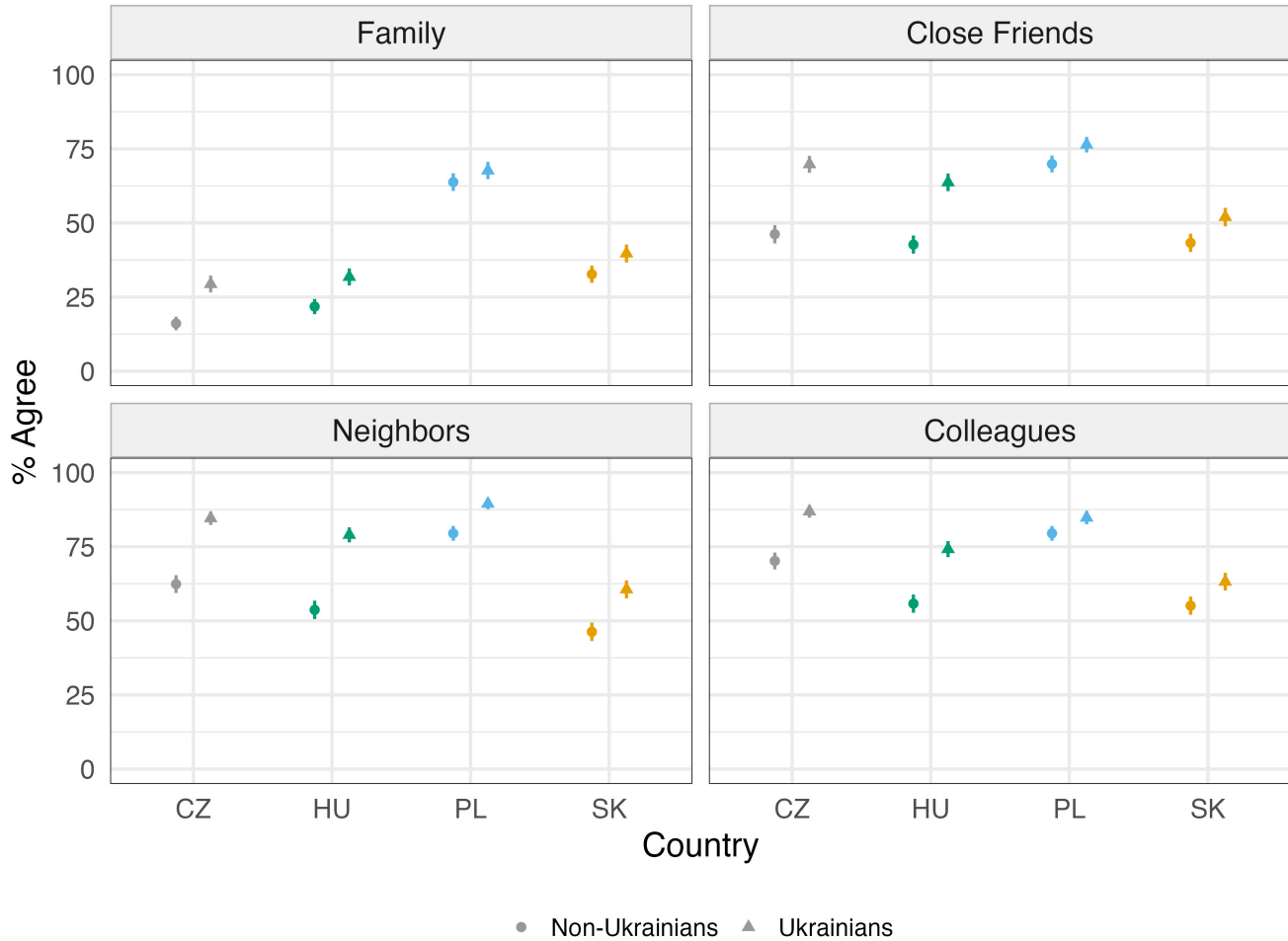
Note: Means presented with 95% confidence intervals

Study 1: Comparing Social Distance between Ukrainian and Other Refugees

Given prior findings on the importance of cultural similarity between Ukrainians and host societies, the prevalence of cultural threat in the survey data, and the substantive association between cultural threat and preferences over refugee admissions, it is worth examining whether cultural threat differs between Ukrainians and other refugee groups. The survey included a modified version of the Bogardus social distance scale, asking respondents to indicate whether they would agree to have either Ukrainian refugees or “other refugees” as family members, close friends, neighbors, or colleagues (yes (1), no (0)). While asking about “other refugees” leaves the identity of the refugee group indeterminate, the questions explicitly set up a contrast with Ukrainians. This contrast likely prompts respondents to consider refugee inflows from more culturally distant groups, providing at least a rough approximation of how social distance varies as a function of refugee group identity.

Figure A3 displays the proportion of respondents willing to engage in each form of social contact with Ukrainian versus other refugees.

Figure A3: Social Distance: Ukrainian Refugees versus Non-Ukrainian Refugees



Note: Means presented with 95% confidence intervals

Across all countries, respondents showed a pro-Ukrainian bias, which grew stronger as the social relationship in question became less personal. While differences in willingness to accept Ukrainians versus other refugees were small in the highly personal context of family relationships, pro-Ukrainian bias became substantially larger in less personal relationships – i.e., as close friends, neighbors, or colleagues.

Study 1: Changes in Preferences on Refugee Admissions over Time

To analyze changes in support for Ukrainian refugee admissions over time, I analyze *Eurobarometer* surveys fielded between July 2022 and May 2024. Specifically, I evaluate whether opposition

to refugee admissions is connected to economic concerns and to conservative stances on sociocultural/transnational issues. To measure economic concerns, I use evaluations of household financial status and the national economy (1-4 scales). I proxy for sociocultural/transnational conservatism with attitudes towards the EU (1-5 scale) and evaluations of non-EU immigration (1-4 scale; not asked in July 2022 or February 2023). For each of these questions, I divide respondents into two groups: those with negative evaluations – e.g., of their household’s financial status or the EU – and those with positive evaluations. Respondents who failed to provide an evaluation are dropped from the analysis. I then assess how preferences over refugee admissions have changed across these subgroups.

The wording and response scale for each item are as follows:

- *Household Financial Status*: How would you judge the current situation in each of the following? The financial situation of your household.
 - 1, Very Good; 2, Rather Good; 3, Rather Bad; 4, Very Bad
- *National Economy*: How would you judge the current situation in each of the following? The situation of the [COUNTRY] economy
 - 1, Very Good; 2, Rather Good; 3, Rather Bad; 4, Very Bad
- *EU Attitudes*: In general, does the EU conjure up for you a very positive, fairly positive, neutral, fairly negative or very negative image?
 - 1, Very Positive; 2, Fairly Positive; 3, Neutral; 4, Fairly Negative; 5, Very Negative
- *Non-EU Immigration Attitudes*: Please tell whether each of the following statements evokes a positive or negative feeling for you? Immigration of people from outside the EU.
 - 1, Very Positive; 2, Fairly Positive; 4, Fairly Negative; 5, Very Negative

Figure A4 plots the percentage of respondents who support further refugee admissions, disaggregated by negative and positive evaluations of household financial status and the national economy. There are substantive intercept- and slope-level differences in refugee admission preferences between those who have pocketbook or sociotropic economic concerns and those who do not. Respondents with economic concerns initially expressed lower support for refugee admissions, and their support decreased more rapidly than that of respondents with positive economic evaluations. For example, in Poland, the difference in support between respondents with positive versus negative evaluations of household financial status was approximately seven percentage points in July 2022. By May 2024, the difference doubled to fourteen percentage points. Similarly, amongst Czechs who evaluated the national economy positively, support for refugee admissions only decreased by about ten percentage points between July 2022 and May 2024. Yet, amongst Czechs with negative evaluations, support for refugee admissions collapsed by 30 percentage points.

Figure A4: Ukrainian Refugee Admission Preferences and Economic Concerns

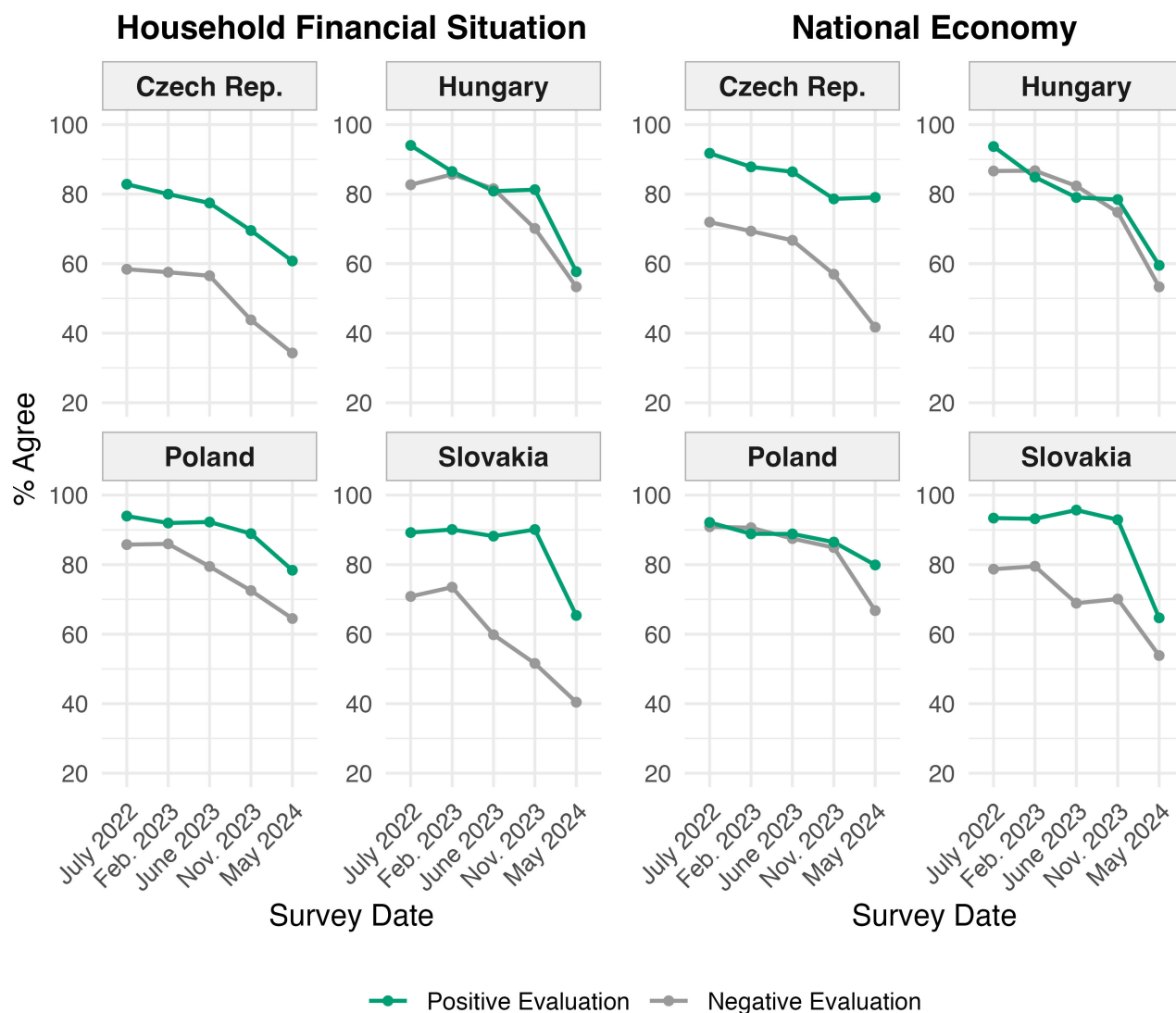
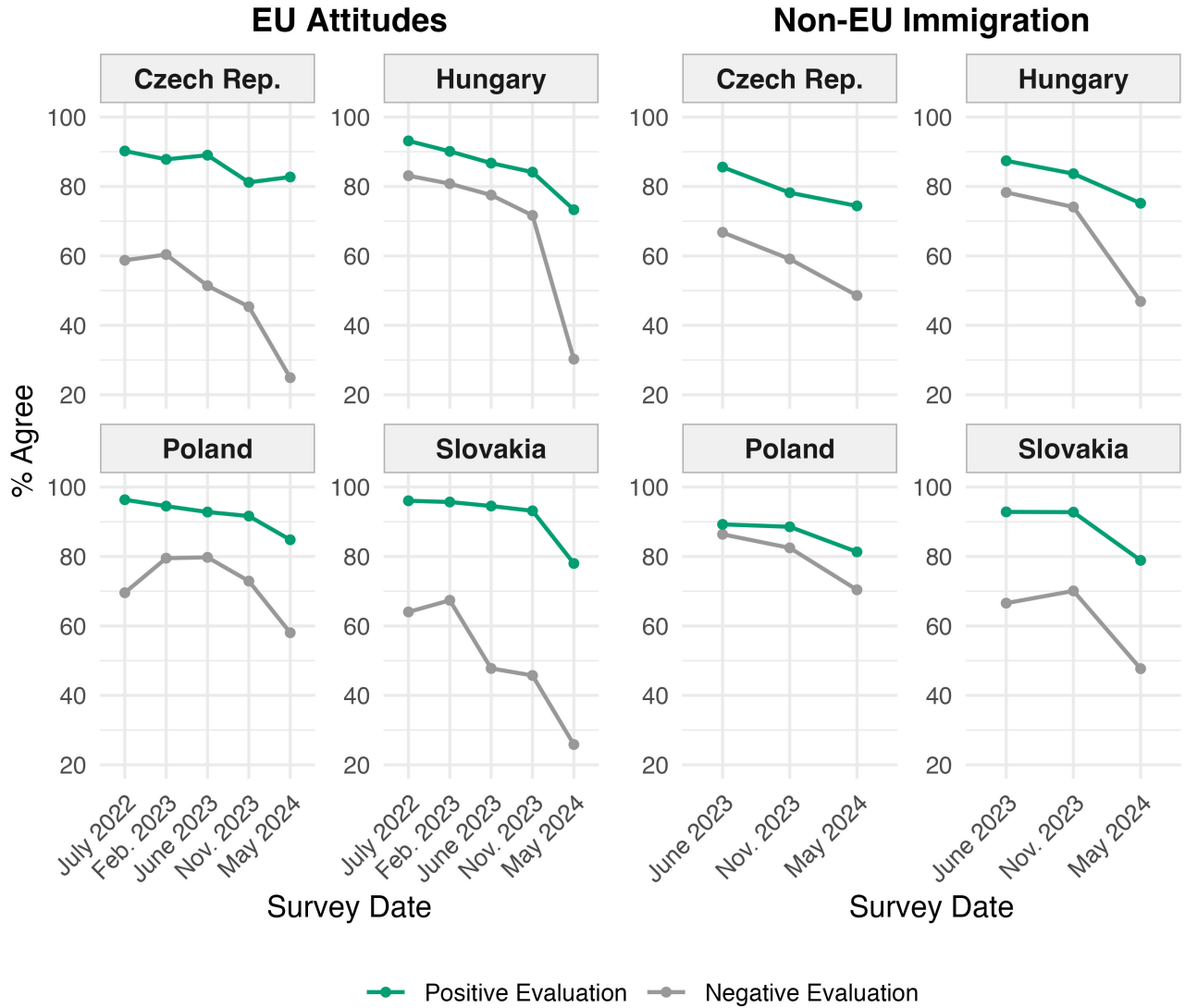


Figure A5 mirrors Figure A4, but disaggregates respondents based on attitudes towards the EU (neutral responses dropped) and non-EU immigration. As with economic concerns, there are substantive differences in intercepts and slopes across the subgroups. Generally, support amongst respondents positively disposed towards the EU and non-EU immigration started high and has remained high. Amongst these respondents, the most drastic decreases in support – about twenty percentage points – occurred in Hungary and Slovakia. Amongst individuals opposed to the EU and non-EU immigration, support for refugee admissions fell across all countries. In the most dramatic case, support amongst Eurosceptics in Hungary fell by over 50 percentage points. Conversely, the smallest decreases occurred in Poland, where support for refugee admissions amongst respondents opposed to the EU and non-EU immigration fell by only about twenty percentage points.

Figure A5: Ukrainian Refugee Admission Preferences and Attitudes related to Sociocultural Conservatism



Study 2: Structural Topic Model

The text corpus is composed of newspaper articles covering the EU funding announcement. Articles were identified by a keyword and date-range search through Google News Slovakia. In total, 50 news articles covered the announcement on or after May 3rd. To pre-process the text data, I used the udpipe Slovak model: “slovak-snk-ud-2.5-191206.udpipe.” Each document was tokenized and annotated for part-of-speech, and lemmatized tokens were retained except for tokens composed entirely of capital letters or numerals, which were preserved in their original form. I restricted the vocabulary to content words (nouns, adjectives, verbs, numerals, adverbs, and proper nouns).

To prepare the data for modeling and to estimate the topic model, I used the stm package (Roberts et al. 2019). First, the `textProcessor()` function handled tokenization, lowercasing, and removal of custom stopwords, while also creating metadata linking documents to their original identifiers. Stopwords were removed using the Slovak stopwords-iso dictionary. The resulting tokens were collapsed at the document level, producing cleaned texts for stm estimation. Second, the `prepDocuments()` function converted the processed texts into the three inputs required by stm: (1) a list of documents represented as integer word indices, (2) the vocabulary of all retained terms, and (3) a metadata frame. During this step, rare terms were dropped by imposing a threshold of appearing in at least two documents.

To determine the number of topics, I ran `searchK()` with candidate models ranging from 2 to 8 topics, using spectral initialization and a fixed seed. Model fit was evaluated with four diagnostics: (1) held-out likelihood, (2) residuals, (3) semantic coherence, and (4) the approximate lower bound. Results showed that held-out likelihood improved up to 5–6 topics, but semantic coherence declined sharply with higher K, and residuals increased notably at $K=7$ (Figure A6). Balancing predictive fit and interpretability, I selected a 4-topic solution as a compromise. The final model converged in 68 iterations and has a residual dispersion of 1.097, indicating an adequate fit.

However, given the limited data and small (468-word) dictionary, topic quality is relatively poor. Coherence values – which indicate how frequently the most probable words co-occur – range from -10.32 to -33.11 . Exclusivity – the degree to which words are unique to a given topic – performs moderately better, with values ranging from 7.53 to 8.73. Prevalence, with a minimum of 0.15, suggests that each topic appears at least somewhat frequently across documents. Taken together, these diagnostics indicate that the topics are distinct but not necessarily theoretically coherent. Nonetheless, examining the words associated with each topic helps illustrate the announcement’s content. Table A6 presents the top seven words for each topic according to highest probability, FREX, lift, and score.

Figure A6: STM Diagnostic Plot

Diagnostic Values by Number of Topics

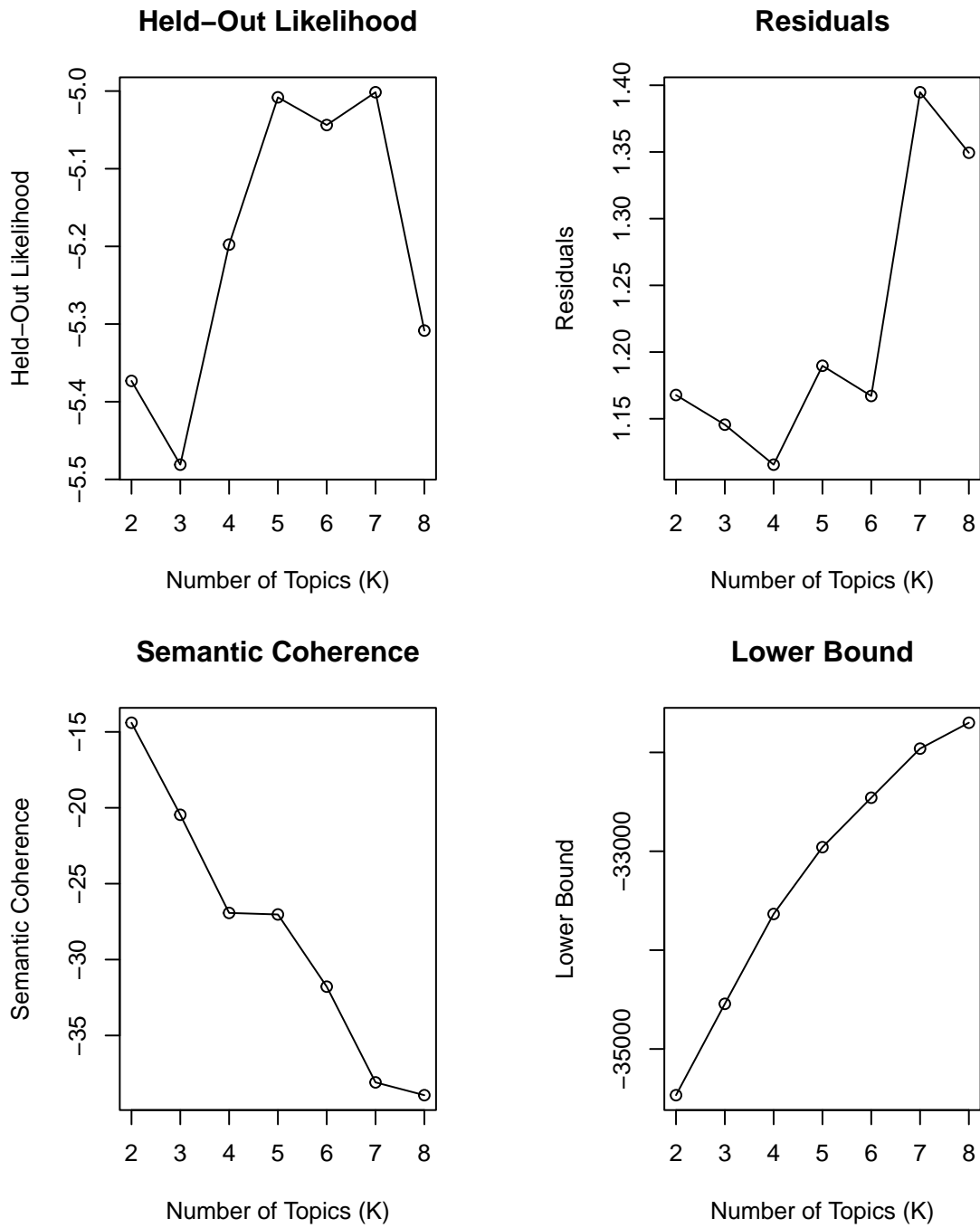


Table A6: STM Topic Top Words with English Translations

Topic	Highest Prob	FREX	Lift	Score
1	eur (euro), program (program), dodatočný (additional), operačný (operational), členský (member), štát (state), európski (European)	zálohový (advance), zaslať (send), zelený (green), dodatočný (additional), operačný (operational), platba (payment), kríza (crisis)	financia (finance), integrovaný (integrated), likvidita (liquidity), pandémie (pandemic), pôvodn (original), stanovisko (statement), účet (account)	zaslať (send), operačný (operational), zálohový (advance), likvidita (liquidity), zúčtovať (settle financially), financia (finance), zmiernení (mitigation)
2	ukrajina (Ukraine), členský (member), utečenec (refugee), prostriedok (resource), štát (state), milión (million), eur (euro)	päť (five), sprístupniť (make available), postihnutý (affected), postaviť (build), eurokomisi (European Commission), suma (sum), rozpočet (budget)	päť (five), postaviť (build), aktivista (activist), celkovo (overall), celosvetový (global), darcovsko (donor-related), dopravu (transport)	sprístupniť (make available), päť (five), aktivista (activist), celosvetový (global), darcovsko (donor-related), dopravu (transport), nasledovať (follow)
3	dieťa (child), ukrajina (Ukraine), človek (person), štát (state), škola (school), európski (European), podpora (support)	dieťa (child), škola (school), pomôcť (help), jeden (one), care (care), právo (right), školský (school-related)	jeden (one), miesto (place), možný (possible), otázka (question), pomôcť (help), predsedníček (chairman), proce (process)	dieťa (child), školský (school-related), škola (school), peniaz (money), organizácia (organization), pomôcť (help), care (CARE)
4	pomoc (aid), núdzový (emergency), ukrajina (Ukraine), utečenec (refugee), podpora (support), ukrajinský (Ukrainian), finančný (financial)	zariadení (facility), amif (AMIF), bmvi (BMVI), hovorkyňa (spokesperson), prijímací (admission), psychologický (psychological), červený (red)	podoba (form), požiadať (request), traum (trauma), udeliť (allocate), zariadení (facility), zmluva (contract), agresia (aggression)	zariadení (facility), nemecko (Germany), amif (AMIF), bmvi (BMVI), hovorkyňa (spokesperson), prijímací (admission), kapacita (capacity)

Study 2: Descriptive Statistics

Table A7: Study 2 Descriptive Statistics

Variable	Level	Mean	SD	Min	Max	N
UKR. Refugee Problem Perception		3.00	0.94	1.00	4.00	3013
Trust Mainstream Media		1.96	0.87	1.00	4.00	2661
State Locus of Control		2.41	0.99	1.00	4.00	3013
Corruption Perceptions		1.58	0.90	1.00	4.00	3013
Accept More Serbs/Romanians		1.97	0.81	1.00	4.00	3013
NATO Involvement		2.59	0.96	1.00	4.00	3013
Feel Informed EU		4.66	2.46	1.00	10.00	3013
Age		46.43	17.01	15.00	86.00	3013
Income		4.40	1.97	1.00	9.00	2944
Left/Right		2.92	0.86	1.00	5.00	3013
Lib/Con		3.06	0.95	1.00	5.00	3013
Religious Attendance		5.80	2.33	1.00	8.00	3013
Size of Settlement		3.82	1.95	1.00	7.00	3013
Treatment	0					1198
	1					1815
Gender	Male					1456
	Female					1557
Education	Elementary					494
	Secondary No Exam					807
	Secondary					1070
	University					642
Region	Bratislavský					390
	Trnavský					318
	Trenčiansky					329
	Nitriansky					385
	Žilinský					384
	Banskobystrický					349
	Prešovský					437
	Košický					421

Table A9: Full Regression Results, Figure 6 (Right Panel) Main Text

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.012 (0.030)	-0.003 (0.034)	-0.004 (0.035)	0.023 (0.094)	0.062 (0.057)	0.025 (0.053)	0.034 (0.051)	-0.003 (0.057)
Age	0.002 (0.001)	-0.002 (0.001)	0.002* (0.001)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)
Secondary, no leaving exam	-0.154** (0.047)	0.006 (0.056)	0.045 (0.056)	-0.055 (0.086)	-0.058 (0.086)	-0.056 (0.086)	-0.053 (0.085)	-0.054 (0.085)
Secondary, leaving exam	-0.091* (0.044)	-0.088 (0.051)	-0.013 (0.052)	-0.040 (0.075)	-0.041 (0.075)	-0.040 (0.075)	-0.038 (0.075)	-0.038 (0.075)
University	0.010 (0.049)	-0.128* (0.055)	-0.023 (0.056)	-0.103 (0.087)	-0.104 (0.087)	-0.103 (0.087)	-0.101 (0.086)	-0.100 (0.086)
Rel. Service Attend.	-0.028** (0.006)	-0.011 (0.007)	0.043** (0.008)	0.019 (0.011)	0.020 (0.011)	0.019 (0.011)	0.019 (0.011)	0.019 (0.011)
Lib/Con	-0.160** (0.017)	0.023 (0.019)	0.262** (0.019)	0.136** (0.030)	0.137** (0.030)	0.136** (0.030)	0.136** (0.030)	0.136** (0.030)
Num.Obs.	3013	3013	3013	1198	1198	1198	1198	1198
R2 Adj.	0.043	0.004	0.072	0.015	0.016	0.015	0.015	0.015

* $p < 0.05$; ** $p < 0.01$; reference categories: elementary; HC2 standard errors in parantheses

Table A11: Full Regression Results and Robustness Compliance Models Figure 7 Main Text

	(1)	(2)	(3)	(4)
Treatment	-0.063 (0.071)	0.012 (0.089)	-0.061 (0.071)	-0.005 (0.089)
Informed EU	-0.062** (0.012)		-0.052** (0.012)	
Media Trust		-0.189** (0.033)		-0.174** (0.033)
Treatment*Informed EU	-0.022 (0.015)		-0.025 (0.015)	
Treatment*Media Trust		-0.111** (0.043)		-0.106* (0.043)
Age	-0.001 (0.001)	-0.003* (0.001)	-0.002 (0.001)	-0.003* (0.001)
Secondary, no leaving exam	0.141** (0.053)	0.170** (0.057)	0.152** (0.054)	0.192** (0.058)
Secondary, leaving exam	0.059 (0.049)	0.084 (0.053)	0.077 (0.051)	0.118* (0.055)
University	-0.006 (0.054)	0.001 (0.057)	0.036 (0.058)	0.069 (0.062)
Rel. Service Attend.	0.011 (0.007)	0.006 (0.008)	0.016* (0.007)	0.014 (0.008)
Lib/Con	0.163** (0.020)	0.134** (0.021)	0.156** (0.020)	0.136** (0.021)
Female			0.103** (0.034)	0.126** (0.035)
Income			-0.001 (0.010)	-0.012 (0.010)
Left/Right			-0.125** (0.021)	-0.098** (0.022)
Size of Settle.			-0.024** (0.009)	-0.027** (0.009)
Num.Obs.	3013	2661	2944	2610
R2 Adj.	0.088	0.109	0.104	0.128

* $p < 0.05$, ** $p < 0.01$; reference categories: elementary, male, Bratislava region; HC2 standard errors in parentheses

Table A12: Full Regression Results CATE Models Figure 8 Main Text

	(1)	(2)	(3)	(4)
Treatment	-0.456**	-0.491**	0.049	0.016
	(0.126)	(0.125)	(0.089)	(0.089)
Lib/Con	0.130**	0.116**	0.181**	0.173**
	(0.030)	(0.030)	(0.020)	(0.019)
State LoC			-0.081**	-0.075**
			(0.026)	(0.026)
Treatment*Lib/Con	0.091*	0.098**		
	(0.039)	(0.038)		
Treatment*State LoC			-0.092**	-0.084*
			(0.035)	(0.035)
Age	-0.001	-0.002	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Secondary, no leaving exam	0.142**	0.163**	0.116*	0.136*
	(0.054)	(0.055)	(0.053)	(0.054)
Secondary, leaving exam	0.063	0.091	0.048	0.077
	(0.049)	(0.051)	(0.049)	(0.051)
University	-0.028	0.031	-0.020	0.035
	(0.055)	(0.059)	(0.054)	(0.058)
Rel. Service Attend.	0.011	0.017*	0.009	0.015
	(0.007)	(0.007)	(0.007)	(0.007)
Female		0.132**		0.121**
		(0.034)		(0.034)
Income		-0.005		-0.006
		(0.010)		(0.010)
Left/Right		-0.144**		-0.137**
		(0.021)		(0.021)
Size of Settle.		-0.024**		-0.020*
		(0.009)		(0.009)
Num.Obs.	3013	2944	3013	2944
R2 Adj.	0.050	0.076	0.071	0.092

* $p < 0.05$, ** $p < 0.01$; reference categories: elementary, male, Bratislava region; HC2 standard errors in paratheses

Study 3: Descriptive and Randomization

Table A13: Sample Descriptives and Randomization

	Control		Treatment		Diff. in Means	Std. Error
	Mean	Std. Dev.	Mean	Std. Dev.		
Gender	1.503	0.500	1.506	0.500	0.003	0.032
Age	40.644	12.758	41.261	12.738	0.617	0.804
Education	1.801	0.758	1.892	0.745	0.091	0.047
Region	4.678	2.343	4.819	2.346	0.141	0.148
Size of Settlement	2.950	1.283	3.038	1.295	0.088	0.081
Income	4.099	2.356	4.096	2.405	-0.004	0.150
Lib/Con	5.322	2.356	5.428	2.532	0.106	0.154

Study 3: Regression Results

Table A14: ATE Estimation, Figure 9 Main Text

	(EU)	(UKR. Ref. Therm.)	(Burden/Benefit)	(Accept UKR Ref.)
Treatment	-0.007 (0.196)	0.220 (0.178)	0.457* (0.180)	0.320 (0.178)
Num.Obs.	1005	1005	1005	1005
R2 Adj.	-0.001	0.001	0.005	0.002

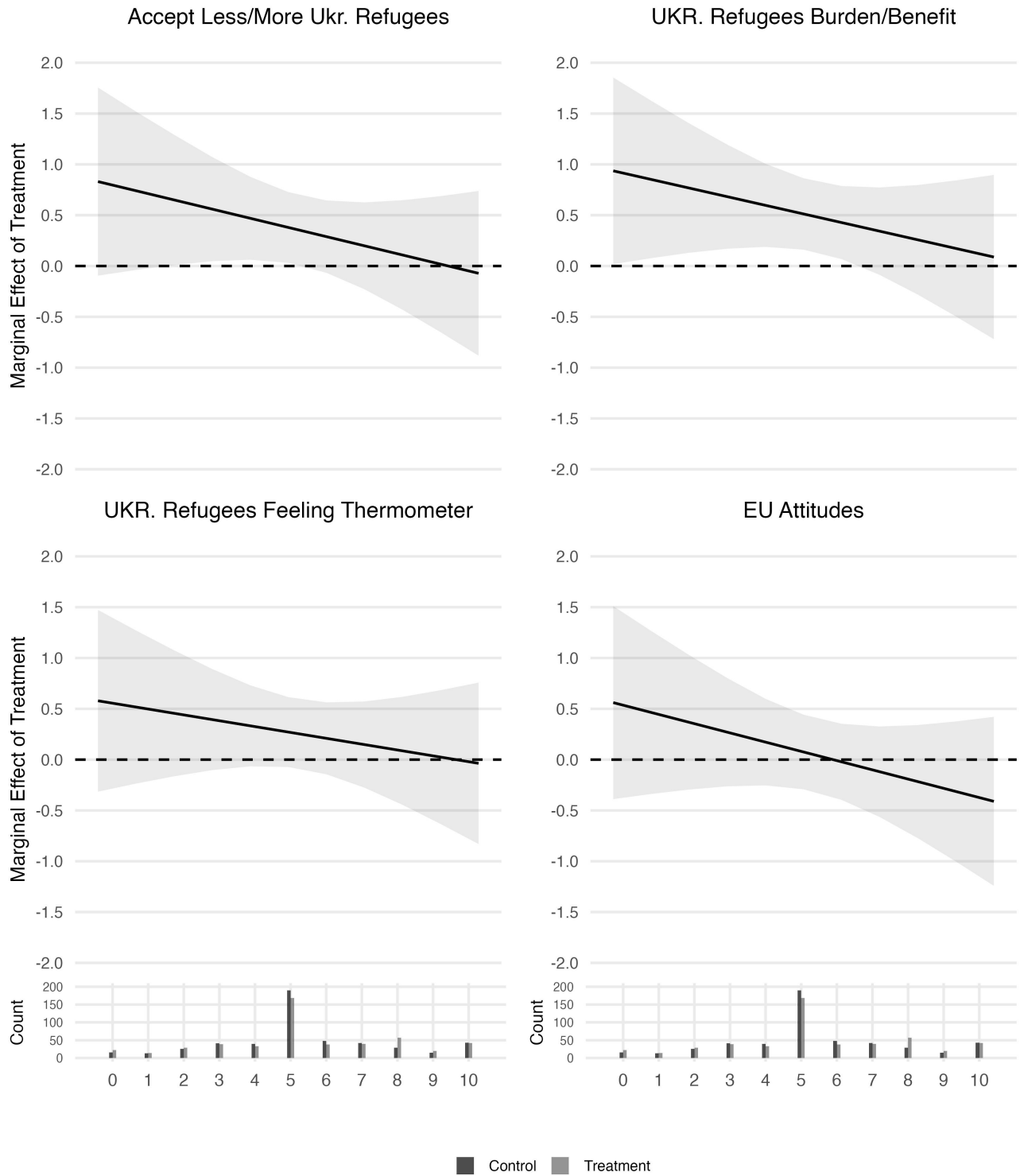
* $p < 0.05$; HC2 robust standard errors in parentheses.

Table A15: CATE Estimation, Figure 10 Main Text

	(EU)	(UKR. Ref. Therm.)	(Burden/Benefit)	(Accept UKR Ref.)
Treatment	0.402 (0.234)	0.427 (0.221)	0.678* (0.221)	0.563* (0.221)
Conservative	-0.082 (0.652)	0.181 (0.578)	0.528 (0.597)	0.445 (0.596)
Treatment*Conservative	-0.939* (0.402)	-0.494 (0.368)	-0.562 (0.378)	-0.603 (0.372)
Num.Obs.	1005	1005	1005	1005
R2 Adj.	0.057	0.010	0.009	0.009

* $p < 0.05$; HC2 robust standard errors in parentheses.

Figure A7: Conditional Average Treatment Effects of EU Financial Support across Individual Ideology (Continuous)



Note: Estimates presented with 95% confidence intervals

Table A16: CATE Estimation, Continuous Operationalization of Lib/Con Ideology

	(EU)	(UKR. Ref. Therm.)	(Burden/Benefit)	(Accept UKR Ref.)
Treatment	0.561 (0.484)	0.579 (0.456)	0.936* (0.468)	0.831 (0.472)
Lib/Con	-0.289* (0.137)	-0.170 (0.124)	-0.096 (0.127)	-0.106 (0.133)
Treatment*Lib/Con	-0.097 (0.083)	-0.062 (0.079)	-0.085 (0.081)	-0.090 (0.081)
Num.Obs.	1005	1005	1005	1005
R2 Adj.	0.118	0.052	0.042	0.046

* $p < 0.05$; HC2 robust standard errors in parentheses.

Table A17: Slovakia Control over Migration Mediation

	(EU)	(UKR. Ref. Therm.)	(Burden/Benefit)	(Accept UKR Ref.)
ACME Slovakia Control	0.108 (0.111)	0.084 (0.084)	0.091 (0.089)	0.096 (0.096)
ADE Treatment	-0.116 (0.156)	0.136 (0.155)	0.366* (0.156)	0.224 (0.149)

* $p < 0.05$

Table A18: EU v. Slovakia Decision-Making Mediation

	(EU)	(UKR. Ref. Therm.)	(Burden/Benefit)	(Accept UKR Ref.)
ACME EU Decision	-0.055 (0.053)	-0.028 (0.029)	-0.021 (0.022)	-0.032 (0.032)
ADE Treatment	0.047 (0.189)	0.248 (0.169)	0.478* (0.175)	0.352* (0.180)

* $p < 0.05$

Table A19: EU Control over Migration Mediate

	(EU)	(UKR. Ref. Therm.)	(Burden/Benefit)	(Accept UKR Ref.)
ACME EU Control	0.028 (0.071)	0.023 (0.059)	0.026 (0.068)	0.027 (0.066)
ADE Treatment	-0.036 (0.177)	0.197 (0.166)	0.431* (0.169)	0.293 (0.163)

* $p < 0.05$

Ethical Practices Concerning Human Participants

In Study 3, participants were recruited using a national online panel managed by 2muse Market Research (Bratislava, Slovakia). All respondents provided informed consent through a form that explained how their data will be used, anonymity and confidentiality, GDPR regulations, and their rights when opting into online panels. The survey was made available to panel interview participants who chose to opt in. All participants understood they were taking part in a research study. Participants were compensated for their participation. If participants successfully completed the survey, they received financial remuneration.

In line with APSA's Principles and Guidance for Human Subjects Research, I sought to avoid physical, psychological, social, and economic harm to respondents engaged in the research. This study did not involve deception. To the best of my knowledge and reflection, this study posed minimal risk of harm to human participants directly engaged in the research process. I am not aware of any foreseeable intended or unintended adverse impact on participants in this study. Study 3 received Institutional Review approval at the University of North Texas under study number IRB-22-676.

Preregistration

Pre-Analysis Plan: Control and Attitudes towards Ukrainian Refugees in Slovakia

Background

An expansive literature focuses on explaining attitudes toward migrants and refugees. Many of these explanations focus on the grievances that arise amongst dominant groups in response to societal newcomers. Grievances can be economic, symbolic/cultural, or physical (see Adida 2021 for overview); and they can be rooted in either personal or sociotropic concerns (e.g., Hainmueller and Hopkins 2014). For example, an individual may oppose immigration due to worries about strains on the welfare state (Steele 2016), concerns about the rise of terrorism (Guild and Garlick 2010), or reservations about threats to cultural homogeneity (Sides and Citrin 2007). Accordingly, studies tend to explain variations in these attitudes by focusing on three types of factors : (1) individual-level characteristics of the attitude holder; (2) individual-level characteristics of the migrant or refugee; and (3) the macro-level, contextual conditions that may moderate or mediate the effects of these characteristics. Importantly, recent work has made a forceful case for differentiating between attitudes towards migrants and refugees (e.g., Abdelaaty and Steele 2022). The two categories of people on the move carry different connotations, and the labels do evoke different reactions (Findor et al. 2021).

Recent scholarship has argued that locus of control is an important determinant of migration attitudes (Harell et al. 2017). Locus of control is conceptualized along three dimensions (corresponding to the three explanation types noted above). First, locus of control can be a evaluation of how much control an individual believes that they have over their own personal situation. Second, it can also refer to attributive external evaluations (Zucker and Weiner 1993); in this case, an evaluation of the extent to which the migrant is personally responsible for their situation. Finally, locus of control can refer to the extent to which an individual believes that society or the government is capable of exerting control in a given domain. Various empirical studies have confirmed that each of these dimensions of control plays an important role in shaping attitudes towards migration and refugees (Harell et al. 2017; Lutz & Karstens 2021; Schwartz et al. 2021; Solodoch 2021). Generally, these studies, especially those focusing on government or societal control, find that increased levels of control either lead to or correlate with stronger pro-migration stances.

Yet, these studies have yet to answer an important question: what happens when governments out-source control to an external actor? Governments and states may lack the capacity to effectively control migration themselves, so they rely on non-governmental or international organizations to help them exert control. The outsourcing of control can have two potentially contradictory effects. On the one hand, individuals may still be assuaged that someone, regardless of who, is controlling the migration situation. On the other hand, delegating the management of a migration situation to an external actor inherently entails the government ceding control to that actor. Thus, external

control over migration management may actually cause sentiments of threat to arise.

This pre-analysis plan details an experiment investigating these competing predictions. The experiment leverages the unprecedented wave of Ukrainian refugees that have transited and resettled in the Central European member states of the European Union (EU). Specifically, it focuses on Slovakia, where over 500,000 Ukrainian refugees have crossed the border, and where nearly 100,000 Ukrainian refugees have chosen to settle. In order to manage this unprecedented migration, the EU has allocated over 500 million euros to Slovakia to help control the situation. Accordingly, the study examines whether EU support for Ukrainian refugees in Slovakia influences migration-related attitudes.

Research Design

To identify the effects of EU support on migration-related attitudes, I will use a between-subjects experiment with a nationally representative sample of Slovaks (N=1000). National representativeness is defined by quotas on age, education, region, size of settlement, and sex. Sample size was determined by constraints imposed by the survey company. In the experiment, respondents will be randomly assigned to one of two groups. Prior to receiving the treatment, respondents will answer three pre-treatment questions:

- In politics, we often talk about liberals and conservatives. Where would you rank on this scale? (0-10)
- Which party would you vote for if parliamentary elections were held next weekend? (nominal)
- To what extent do you agree or disagree with the following statement? I often feel that I have little influence over the things that happen to me. (0-10)

After answering these questions, respondents are exposed to one of two randomly-assigned treatments. For each group, there is a five second timer that must expire before participants can move on to the next question. The *non-EU group* receives the following text:

- Over the past couple of months, 90,000 people who are running from Ukraine have settled in Slovakia.

The *EU group* receives the following text:

- Over the past couple of months, 90,000 people who are running from Ukraine have settled in Slovakia. The European Union has given Slovakia over 500 million euros to help manage the situation. These resources from the European Union will help Ukrainians in Slovakia with fundamental needs like housing, food, and education. Eurofunds support Ukrainians in Slovakia.

Four dependent variables follow:

- On a scale from 0 to 100, how would you express your personal relationship to people running from Ukraine to Slovakia. 0 indicates cold, negative feelings, 50 indicates neutral feelings, and 100 indicates warm, positive feelings.
- Do you think that the Ukrainians who decide to settle in Slovakia will be a burden or a benefit for Slovakia? (0-10)
- Do you think that Slovakia should accept fewer or more people running from Ukraine? 0 means significantly less, 10 means significantly more. (0-10)
- In general, what is your impression of and feeling about the European Union (EU)? 0 means very negative, 10 means very positive. (0-10)

Next, respondents answer three questions measuring potential mediators.

- To what extent do you agree or disagree with the following statements? 0 means you do not agree at all, 10 means you completely agree
 - The national government in Slovakia has control over the migration situation from Ukraine.
 - Key decisions in Slovakia are made by the European Union rather than the national government.
 - The European Union has control over the migration situation from Ukraine.

Finally, the survey company provides the age, education, income, region, and sex of the respondent.

Hypotheses

As noted above, EU support for managing the migration situation can lead to potentially different reactions. Respondents may feel assuaged that the situation is being handled. Alternatively, they may respond negatively given the fact that it is an external actor, and not the national government, exerting control over the migration situation. Accordingly, I do make the following predictions about average treatment effects:

H1: Respondents in the *EU Group* will have more positive attitudes towards Ukrainian refugees than respondents in *non-EU Group*.

H2: Respondents in the *EU Group* will have more negative attitudes towards Ukrainian refugees than respondents in *non-EU Group*.

H3: Respondents in the *EU Group* will indicate that Ukrainian refugees are less of a burden than respondents in *non-EU Group*.

H4: Respondents in the *EU Group* will indicate that Ukrainian refugees are more of a burden than respondents in *non-EU Group*.

H5: Respondents in the *EU Group* will indicate that Slovakia should accept more Ukrainian refugees than respondents in *non-EU Group*.

H6: Respondents in the *EU Group* will indicate that Slovakia should accept less Ukrainian refugees than respondents in *non-EU Group*.

H7: Respondents in the *EU Group* will have more positive attitudes towards the EU than respondents in *non-EU Group*.

H8: Respondents in the *EU Group* will have more negative attitudes towards the EU than respondents in *non-EU Group*.

I also predict that the extent to which the respondent feels that either the national government or the EU has control over the migration situation will mediate their attitudes towards Ukrainian refugees, the extent to which they consider Ukrainian refugees a burden, their stances on whether Slovakia should accept more refugees, and their attitudes towards the European Union. Accordingly, I posit the following mediation hypotheses:

H9: The extent to which a respondent feels that the national government in Slovakia has control over the migration situation will mediate the effect of the *EU Group* treatment on attitudes towards Ukrainian refugees, the extent to which they think Ukrainian refugees are a burden, stances on whether Slovakia should accept more Ukrainian refugees, and attitudes towards the EU.

H10: The extent to which a respondent feels that key decisions in Slovakia are made by the EU rather than the national government will mediate the effect of the *EU Group* treatment on attitudes towards Ukrainian refugees, the extent to which they think Ukrainian refugees are a burden, stances on whether Slovakia should accept more Ukrainian refugees, and attitudes towards the EU.

H11: The extent to which a respondent feels that the EU has control over the migration situation will mediate the effect of the *EU Group* treatment on attitudes towards Ukrainian refugees, the extent to which they think Ukrainian refugees are a burden, stances on whether Slovakia should accept more Ukrainian refugees, and attitudes towards the EU.

Recent work indicates that respondent ideology may moderate responses to migration-related pressures and EU influence (van der Brug & Harteveld 2021). The moderating role of ideology may manifest as either a polarization effect or as a ceiling effect.

If ideological moderation manifests as a polarization effect, conservatives will deepen their anti-migration attitudes in response to EU influence over migration, while liberals will shift their attitudes in a pro-migration direction. In other words, ideologically-motivated information processing will cause conservatives to interpret the EU's role negatively and liberals to interpret it positively. If ideological moderation manifests as a ceiling effect, conservatives – who already hold entrenched anti-migration views (Kustov 2022) – will not update their preferences in response to the treatment. Conversely liberals, who do not hold entrenched anti-migration or anti-EU views, may shift their attitudes in response to the treatments. This discussion leads to the following hypotheses:

- *H12, Conservative Polarization:* Conservatives in the *EU Group* will have more negative attitudes towards Ukrainian refugees, more restrictive stances on whether Slovakia should accept more Ukrainian refugees, more negative attitudes towards the EU, and will consider Ukrainian refugees more of a burden than conservatives in the *non-EU Group*.
- *H13, Liberal Polarization:* Liberals in the *EU Group* will have less negative attitudes towards Ukrainian refugees, less restrictive stances on whether Slovakia should accept more Ukrainian refugees, less negative attitudes towards the EU, and will consider Ukrainian refugees less of a burden than liberals in the *non-EU Group*.
- *H14, Conservative Ceiling Effects:* Conservatives in the *EU Group* will have the same attitudes towards Ukrainian refugees, the same stances on whether Slovakia should accept more Ukrainian refugees, the same attitudes towards the EU, and the same evaluation of the extent to which Ukrainian refugees are a burden as conservatives in the *non-EU Group*.
- *H15, Liberal Ceiling Effects:* Liberals in the *EU Group* will have more negative attitudes towards Ukrainian refugees, more restrictive stances on whether Slovakia should accept more Ukrainian refugees, more negative attitudes towards the EU, and will consider Ukrainian refugees more of a burden than liberals in the *non-EU Group*.

Analysis

To test *H1-H8* – i.e., to identify average treatment effects – I will compare means between the two groups using unpaired two-sample t-tests, and linear regression with a binary treatment indicator variable. As a robustness check, I will also present the linear regression results with and without pre-treatment covariate adjustment.

To test *H9-H11* – i.e., to identify average causal mediation effects – I will estimate a causal mediation model using the mediation package in R (Imai et al. 2011). Each of the three listed potential mediators – national government control over the migration situation, key decisions made by EU, and EU control over the migration situation – will be set as mediators for each of the four dependent variables. This results in a total of twelve mediation models. All will be estimated with robust standard errors, and with the default option of quasi-bayesian confidence intervals based on 1000 simulations. The models will be estimated with the following pre-treatment covariates: age, education, individual locus of control, liberal/conservative ideology, size of settlement, and sex. I will conduct sensitivity analyses of the assumption of no confounding between the mediators and outcome variables by reporting the value of the ρ parameter at which the average causal mediation effect crosses 0.

To test *H12-H15* – i.e., to identify subgroup treatment effects – I will compare means across the two experimental groups for conservatives and liberals separately. For robustness – i.e., to ensure that results are not an artefact of any specific operationalization – I will use multiple operationalizations of conservative and liberals:

- liberals < 4 , conservatives ≥ 4
- liberals < 5 , conservatives ≥ 5
- liberals < 6 , conservatives ≥ 6
- liberals below sample mean, conservatives above sample mean
- liberals one standard deviation below sample mean, conservatives one standard deviation above sample mean
- liberals ≤ 2 , conservatives ≥ 9

More formally, I will interact the binary treatment indicator variable with the measure of liberal/conservative ideology. Finally, I will repeat these analyses based on stated vote choice instead of self-reported ideology. Conservatives voters will be defined as voters of the following political parties: L'SNS, Republika, Sme Rodina, Smer, and SNS; liberal voters will be defined as voters of the following party: Progressive Slovakia, SaS, and Za Ludi. For these analyses, voters of other parties will be dropped, and a binary indicator variable for nationalist versus progressive will be interacted with the binary treatment indicator.

I will assess balance across relevant covariates to ensure successful randomization and assess sample representativeness using census data. If there is sufficient reliability ($\alpha \geq 0.70$), I will combine the three dependent variables asking directly about Ukrainian refugees (feeling thermometer, burden/benefit, accept more/less) into a single index. For inference, statistical significance will be set at $\alpha \leq 0.05$.

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Preregistration and Deviation Report

1. *Hypothesis 1* Respondents in the EU Group will have more positive attitudes towards Ukrainian refugees than respondents in non-EU Group.

H1 Respondents in the EU Group will have more positive attitudes towards Ukrainian refugees than respondents in non-EU Group.

Test: Figure 9, Table A14

Result: Not Confirmed

Deviation:

H2 Respondents in the EU Group will have more negative attitudes towards Ukrainian refugees than respondents in non-EU Group.

Test: Figure 9, Table A14

Result: Not Confirmed

Deviation:

H3 Respondents in the EU Group will indicate that Ukrainian refugees are less of a burden than respondents in non-EU Group.

Test: Figure 9, Table A14

Result: Confirmed

Deviation:

H4 Respondents in the EU Group will indicate that Ukrainian refugees are more of a burden than respondents in non-EU Group

Test: Figure 9, Table A14

Result: Not Confirmed

Deviation:

H5 Respondents in the EU Group will indicate that Slovakia should accept more Ukrainian refugees than respondents in non-EU Group.

Test: Figure 9, Table A14

Result: Not Confirmed, $p=0.073$

Deviation:

H6 Respondents in the EU Group will indicate that Slovakia should accept less Ukrainian refugees than respondents in non-EU Group.

Test: Figure 9, Table A14

Result: Not Confirmed

Deviation:

H7 Respondents in the EU Group will have more positive attitudes towards the EU than respondents in non-EU Group.

Test: Figure 9, Table A14

Result: Not Confirmed

Deviation:

H8 Respondents in the EU Group will have more positive attitudes towards the EU than respondents in non-EU Group.

Test: Figure 9, Table A14

Result: Not Confirmed

Deviation:

H9 The extent to which a respondent feels that the national government in Slovakia has control over the migration situation will mediate the effect of the EU Group treatment on attitudes towards Ukrainian refugees, the extent to which they think Ukrainian refugees are a burden, stances on whether Slovakia should accept more Ukrainian refugees, and attitudes towards the EU.

Test: Table A17

Result: Not Confirmed

Deviation: Did not include covariates in outcome-moderator model

H10 The extent to which a respondent feels that key decisions in Slovakia are made by the EU rather than the national government will mediate the effect of the EU Group treatment on attitudes towards Ukrainian refugees, the extent to which they think Ukrainian refugees are a burden, stances on whether Slovakia should accept more Ukrainian refugees, and attitudes towards the EU.

Test: Table A18

Result: Not Confirmed

Deviation: Did not include covariates in outcome-moderator model

H11 The extent to which a respondent feels that the EU has control over the migration situation will mediate the effect of the EU Group treatment on attitudes towards Ukrainian refugees, the extent to which they think Ukrainian refugees are a burden, stances on whether Slovakia should accept more Ukrainian refugees, and attitudes towards the EU.

Test: Table A19

Result: Not Confirmed

Deviation: Did not include covariates in outcome-moderator model

H12 Conservatives in the EU Group will have more negative attitudes towards Ukrainian refugees, more restrictive stances on whether Slovakia should accept more Ukrainian refugees, more negative attitudes towards the EU, and will consider Ukrainian refugees more of a burden than conservatives in the non-EU Group.

Test: Figure 10, Table A15, Figure A7, Table A16

Result: Not Confirmed

Deviation: Only used two operationalizations: binary (liberals ≤ 5 v. conservatives ≥ 6) and continuous

H13 Liberals in the EU Group will have less negative attitudes towards Ukrainian refugees, less restrictive stances on whether Slovakia should accept more Ukrainian refugees, less negative attitudes towards the EU, and will consider Ukrainian refugees less of a burden than liberals in the non-EU Group.

Test: Figure 10, Table A15, Figure A7, Table A16

Result: Partly Confirmed

Deviation: Only used two operationalizations: binary (liberals ≤ 5 v. conservatives ≥ 6) and continuous

H14 Conservatives in the EU Group will have the same attitudes towards Ukrainian refugees, the same stances on whether Slovakia should accept more Ukrainian refugees, the same attitudes towards the EU, and the same evaluation of the extent to which Ukrainian refugees are a burden as conservatives in the non-EU Group.

Test: Figure 10, Table A15, Figure A7, Table A16

Result: Partly Confirmed

Deviation: Only used two operationalizations: binary (liberals ≤ 5 v. conservatives ≥ 6) and continuous

H15 Liberals in the EU Group will have more negative attitudes towards Ukrainian refugees, more restrictive stances on whether Slovakia should accept more Ukrainian refugees, more negative attitudes towards the EU, and will consider Ukrainian refugees more of a burden than liberals in the non-EU Group.

Test: Figure 10, Table A15, Figure A7, Table A16

Result: Not Confirmed

Deviation: Only used two operationalizations: binary (liberals ≤ 5 v. conservatives ≥ 6) and continuous

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